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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,358	09/15/2003	Majid Leonard Riazat	25910.721.201	1616
21971	7590	06/30/2005	EXAMINER	
WILSON SONSINI GOODRICH & ROSATI			ABRAMS, NEIL	
650 PAGE MILL ROAD			ART UNIT	
PALO ALTO, CA 94304-1050			PAPER NUMBER	
			2839	
DATE MAILED: 06/30/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/663,358

Applicant(s)

RIAZIAT ET AL.

Examiner

Neil Abrams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) ~~1-38~~ ¹⁻³⁸ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) ~~1-38~~ ^{1-9, 12-17, 20-38} is/are rejected.
- 7) ☐ Claim(s) ~~1-38~~ ^{10, 11, 18, 19} is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ 3 sheets
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

In view of the papers filed November 8, 2004, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by ^{addition of} Bruce T. Quinn and Y-Ching Pao as coinventors.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.

Abstract, line 6 should read ⁻⁻such as a rigid or flexible extension board....—at end,
a sentence to the claim 10 ground connection to the to-can should be added.

Drawings 1A, 1B, 2, and others, if directed to "prior art" must be so labeled.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Spec. objected to page 2 is to background and discussion of fig. 5 on page 2 is therefor confusing. Is fig. 5 to prior art? Clarification or correction is required.

Claims 13-17, 20-22, 33-35, 1-19, 12, 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Card in view of Ames Musk, Anderson and Sawada.

For claims 13, 33 Card includes optical connectors 102, 140 (fig. 1) and narrow flexible extension boards 110, 142 with connection regions for connectors 102, 140 and for pcbs 124 (see fig.). Card connectors are not shown to be TO-cans. The use of TO-cans is shown by Must figs. 2, 3, 4, and Ames at 14, 16. Obvious to use such types connectors in card to improve signal speed as noted in Musk.

Claims 14, 15, 16, 17, 22 are to standard features and are not seen to be at issue. For claim 21, see card, figs. 9, 10 with connections 400, 450 extending into gap between connector and extension board claims 34, 35 terms met by use of TO-cans described above.

For claims 1, 20, 30, the Card modified assembly lacks an ic device on an extension board. Anderson at 108 and Sawada fig. 13, 14 at 60, 61 show extension boards with components. Obvious to add components to the card system in view of these teachings.

This would save space on the main circuit board. While Sawada uses capacitor at 60, also obvious to use lcs at such positions, such change producing no new result over that shown. Also "peripheral circuit" at 61 might be reference to IC type device. Claim 1, lines 15, 16 refer to obvious choice of circuit paths and also reads on Sawada, fig. 10 circuit paths. Also recited width relationship do not avoid Sawada figs. 13, 14 system since cables 46 could be made as narrow as necessary and are shown as is only for illustration. For claim 8, card boards 110, 142 do not include rigid part. Sawada uses plate 47 (fig. 3) with the flex circuit 46. Obvious to use such plate in Card for flex

circuits 110, 142 to stabilize their position. This would meet claim 8 limitation. Other dependent claims 2-7, 9, 12, 31, 32 do not appear to be separately at issue.

Claims 1, 2, 4-9, 12, 20 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawada in view of Card, Ames and Musk.

Sawada discloses optoelectric flexible connectors 10, 10 (fig. 18) and a extension board 46 with lcs mounted at 46 and with contacts at 46d, b for the connectors 10, 10 and contacts 43 positioned to engage holes in a main pcb. Sawada does not use T0-cans. Obvious to form connectors 10, 10 as T0-cans in view of Ames and Musk to improve signal speed Sawada flex sheet 46 width exceeds twice width of a connector 10. Even without other references it would have been obvious to divide sheet 46 into two sheets midway between 1Cs 46a. This would enable one at a time to be replaced. For claim 8, the sheet 46 is a flexible sheet but with plate 47 attached is also readable as including a rigid board or section. Other dependent claims treated as discussed above. For claims 1, 12 should the matter be at issue, Sawada does not depict a main pcb. Card discloses such a main pcb at 130. Obvious that the Sawada assembly would be used with such a main pcb as that is essential for its use.

Claims 1-8, 12, 23-29, 30-32 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Almquist in view of Musk, Ames, Sakamoto and Gilliland.

Almqurst discloses optical connectors 13, 15 to be joined to rigid extension boards formed by parts 25, 26, 40, 41 with contacts 65 on one side for connection to parts 13, 15 and contacts on the other side at 17d, etc, (fig. 4) to be joined to a pcb 135 (fig. 8). An integrated circuit 50, 51 is included on each boards 40, 41. Since, issues

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may arise as to clarity of Almquist disclosure, also see Gilliland use of extension boards 114, 110 soldered to pct 102. Obvious to so form Almquist device ^{for} ~~the~~ more secure attachment circuit connections.

Almquist does not ~~Musk~~ use T0-cans. ^{Ames and Musk use T0-cans.} Obvious to use such types in Almquist for increased signal speed as noted in Musk.

Claims 2-8, 12 etc all met by Almquist as modified, and do not appear to be at issue.

For claim 23, 36, etc while Almquist appears adequate, the recited arrangement of contacts might be at issue. Sakamoto shows an "extension board", fig. 4 with contacts on front side for connector 3 and on rear side for pcb mounting. Obvious to use such arrangement in Almquist for a more simple manner of assembly. In such combination the rear mounted IC would be retained on the extension board.

Claims 10, 11, 18, 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication should be directed to Neil Abrams at telephone number (571)272-2089.

Ab4rams/ds

06/23/05


NEIL ABRAMS
EXAMINER
ART UNIT 322